

# Colorado Medicine

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# COLORADO MEDICINE

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VOL. I.

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No. 7

## LEADING ARTICLES

### *THE TUBERCULIN TREATMENT OF PULMONARY TUBERCU- LOSIS.*

The diagnostic and therapeutic use of tuberculin is to-day opposed by the rank and file of the profession. Many of our most prominent medical men are vigorous in their denunciation of its use. My impression is that most of this opposition comes from men who have never used the drug correctly—or whose knowledge of the agent comes second hand, either through hearsay or reading.

Those men who have had a large experience with this drug entertain no such tuberculino-phobia. There are isolated instances of physicians who have persisted in its administration in spite of almost universal criticism. At a recent meeting of the representatives of the German Sanatoria for the treatment of tuberculosis, some very favorable reports of the therapeutic use of tuberculin were made. To Dr. Goetsch, especially, is due the credit of rescuing this remedy from the oblivion into which it had almost entered. The fear and condemnation of this agent are relics of the violent reaction which occurred, soon after it was given to the world by Robert Koch. Little was then known about the correct method of using tuberculin. It was given indiscriminately and recklessly in all cases of tuberculosis. If patients had fever, they were given large doses of tuberculin to counteract this fever; and of course the temperature kept going higher and the patient getting weaker. This was the

usual treatment. Is it any wonder, then, that there was a general condemnation of the drug?

Fortunately one man was treating consumption with this remedy, along rational lines. This was Dr. Goetsch of Slavenitz (Austria-Silesia). He reasoned that no benefit could be gained by artificially increasing (two or three times a week) the already supernormal temperature of the consumptive, by these injections. He began treatment with exceedingly small doses, increasing very slowly and cautiously. The initial dose of the injections was adapted to the physical findings and the strength of the patient, generally about  $1/10$  of a milligram of the old tuberculin. If, however, this dose produced a rise of temperature it was decreased to  $1/100$  of a milligram; if this proved too large, then the new tuberculin (T. R.), was resorted to (which in doses of  $1/1000$  of a milligram is nearly always well borne). As soon as  $1/10$  of a milligram of T. R. is reached,  $1/10$  of a milligram resp. 1 milligram of the old tuberculin, is well borne.

Goetsch states that by gradually increasing the dose, one succeeds in bringing the patient up to one gram of the old tuberculin without reactions, where the treatment is considered at an end. The bacilli, as well as the sputum and cough, have disappeared. The weight and the physical signs have also approached a normal standard.

Goetsch has two cardinal principles which govern him in this treatment.

1. Do not inject patients having any fever.
2. Do not increase the dose until the last dose remains without any reaction.

In the year 1891, Goetsch treated nine

cases of consumption according to this method.

From 1892 to 1894, in consequence of the proclaimed dangers, no patients were willing to undergo the treatment. The lasting improvement, however, of those treated by him in 1891, caused a renewed influx of patients for treatment, sent him by their restored friends.

He reports 175 patients treated longer than four weeks with tuberculin. Of these 125 (71 per cent) are to be regarded as cured. Of the remaining 50, most of them discontinued treatment prematurely, so that only an improvement can be recorded. The duration of treatment of the 125 patients discharged as cured, extended, on an average, over a period of 198 days, with a minimum of 50 and a maximum of 791 days. From the prolonged treatment of 791 days, it may be seen that even advanced cases finally yielded to the treatment. In order to convince himself that tuberculin itself was a curative agent, he abstained from all other measures, medicinal and hygienic, in the early years of its use, and only since he has felt positive of its value, from the results gained, has he, since 1896, combined it with other measures of known value, without especially shortening the duration of the treatment.

The favorable reports concerning the use of tuberculin are not generally known. Goetsch's experience, and that of a good many other men, should cause us to refrain from a general condemnation of this agent—and think "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

A conservative prophecy would be that the profession will gradually take up the use of tuberculin—along the rational lines laid down by Goetsch.

JAMES RAE ARNEILL.

*The American Medical Association* meetings will attract many members from Colorado. (See page 260.)

## ORIGINAL PAPERS

### A CASE OF HYSTERICAL HYPER-PYREXIA AND HEMOPTYSIS.

BY BERNARD OETTINGER, M. D., DENVER.

Pyrexia and hemoptysis as manifestations of hysteria are in themselves probably no more remarkable than the more common paralyses. The latter are more frequent because the element of suggestion, which is the chief stimulus from without, would naturally more often affect voluntary functions. Even in organic disease some of us have seen body temperature raised or lowered, for a time at least, by suggestion. But such change demands the effort of a mental agent educated to produce powerful psychic effect, or one possessing strong natural force of this kind. For the same reason not every hysterical patient who would take melancholy pleasure in experiencing high temperature is capable of *autosuggestion* in this respect. Hence, as is some times noted in functional disease, the temptation to simulate this symptom and the necessity to guard against acceptance of apparent fever which is brought about by pure deception. The timely use of a hot-water bag, a nearby radiator, etc., to assist in making up the temperature record, or the swallowing of blood from the mouth which is later regurgitated for lung hemorrhage is not unknown. Of these things the text-books give warning. But some instances of hysterical fever and blood-spitting, like the paralyses, are honest counterfeits typical of functional disease.

The following case is recorded in illustration: The patient, E. R., male, Russian, aged 29 years, belonged to Dr. John Elsner's service at the Jewish Hospital for Consumptives. He had been sent to Denver from Cincinnati, where a diagnosis of pulmonary tuberculosis had been made.



This diagnosis rested upon a supposed reaction to an injection of .01 tuberculin, chest dullness on the right side, anteriorly and posteriorly at the level of the fifth rib and just above it, fine subcrepitant rales in this area and spitting of blood almost daily during a stay of 17 days in the Cincinnati City Hospital. Examined by Dr. Elsner, January 27, 1903, at the time of the patient's admission to the Denver Hospital for Consumptives, slight dullness could be detected at base of right lung, but no rales. The patient frequently spoke of feeling ill, complaining chiefly of headache and pains in the chest. He coughed up bloody mucus at times. The temperature taken morning and evening was normal. As the symptoms mentioned did not abate, the patient was put to bed February 12, 1903. On this day at 9 p. m. the thermometer showed  $108^{\circ}$  F., but as the temperature had been slightly below normal during the day it was ascribed to a fault of the instrument. During the next two days, the temperature remained normal or slightly below it, except an evening rise to  $100^{\circ}$  and  $104.2-5^{\circ}$  F., respectively. The temperature was taken at 9 a. m. and 9:10 a. m. of February 16th at which time  $114^{\circ}$  F. was recorded by mouth and rectum. I saw the patient for the first time at noon of this day. The temperature was then  $97\frac{1}{2}^{\circ}$ .

Examination chiefly directed to the nervous system developed the following condition, in reference to which it may be said that beyond a statement as to the frequent bloodspitting, the headache and erratic action of the thermometer I then had no previous history. The patient is somewhat above medium height, large boned, of spare figure, but not emaciated. The face is pale, the eyes closed. Several irregularly shaped, rounded scars appear on the forehead. Respiration 20-22, pulse regular and 60 to 70 per minute. Patient moans occasionally and appears stupor-

ous. Interrogated in a loud voice, he answers laconically, but often adds complaint of pain in right chest and head. Says he cannot hear or see well since his sickness began; what length of time this was meant to convey cannot be learned. In reference to face scars and some found on the body, patient says they are the result of smallpox. Syphilis denied. When eyes are opened, complete ptosis of the right lid is noted; when closed, the left lid remains partially raised. External eye muscles normal except left external rectus, which does not completely draw the eyeball into the left canthus. Pupillary reaction probably normal, but sluggish. Difficulty is experienced to retain the patient's attention while carrying out necessary tests. Teeth can be shown. Lips can be puckered and widened. Some diminished innervation is apparent on the left side of face. No other signs of paralysis. Results in tests of gustatory sense are unsatisfactory. No rigidity of neck. Abdominal reflex: R. present, L. uncertain. Cremasteric reflex present. Knee jerks active. Kernig's sign and Babinski reflex negative. Many small, round scars typical of smallpox upon the back. A large bluish-red discoloration on lower third of left leg is said to be the result of a pistol wound received while in the army. No penal scar. Dermography appears on test. In reference to sensation, complete anesthesia over top of head from a line corresponding to beginning of hair growth to one drawn horizontally through the occipital protuberance; over chest anteriorly, from height of clavicles to a line drawn across the umbilicus; over the back, from the top of the scapulas to the 12th dorsal vertebra. Symmetrical anesthesia over both shoulders and upper third of humeri. Heat and cold can be detected over areas not anesthetic. Muscle sense probably normal. Patient's answers denote some lack of attention.

Toward the end of the examination, the patient is more wide awake than at the beginning, and appearing strong enough, is required to stand. Some static ataxia is apparent and also a stumbling gait. Several times the patient coughs up bloody mucus.

The anesthesia is clearly of a functional type; yet the association of sensory disturbance of this nature with organic disease is not infrequent. For a pons lesion, the following could be brought in relation: Very high temperature, ataxia, involvement of the 6th (paresis of left external rectus muscle), 7th (paresis of left orbicularis and left facial muscles) and 8th (diminution of hearing) cranial nerves in a patient ostensibly tuberculous, i. e., where tubercle might be suspected. In this case involvement of the 3rd nerve (right levator palpebrae) would be unaccounted for; and for this a separate and probably central lesion would need to be assumed. For the time the diagnosis was left in abeyance.

I next saw the patient at noon two days later (18th). He was clearer mentally, although not inclined to talk. The temperature was  $98^{\circ}$ , but at 6 a. m. on this day it had been  $106.2-5^{\circ}$ . Significant was the report of the nurse that on the day previous the patient had been much brighter. Reference to chart showed that the highest temperature recorded for the day had been  $100^{\circ}$  at 9 p. m. The good report concerning the previous day, the excellent rest at night and the slight but unmistakable general improvement made improbable the presence of organic disease, and observation for a day or two more excluded the latter with certainty. As regards the remarkable temperature range, it became a question of hysterical pyrexia or simulation. On account of the rarity of the former the patient was more closely observed, the temperature taken more frequently, sometimes for a period of two

hours at 10 minute intervals, also the sublingual was occasionally verified by the rectal temperature. As quick thermometers were used, it was thought at one time that perhaps high temperature was simulated by permitting the mobile mercury to run down by holding the instrument inverted while in the mouth. Experiment proved this impossible. Strumpel speaks of deceptive registration produced by pressure of the thermometer bulb. If this can be accomplished the trick would be available in rectal as well as mouth temperatures. Our own attempts to raise the mercury by slight pressure of the fingers on the bulb resulted negatively.

After all, it became necessary to recognize a genuine hyperpyrexia. The hemoptysis continued throughout the attack, and during a second siege of headache and chest pains, associated with a maximum temperature of  $104^{\circ}$  F., which occurred several days before the patient's departure from the hospital, expectoration of blood was even more pronounced. In this connection it must be said that the patient was anxious to return home, so that simulation of hemorrhage for the purpose of earning hospital care must be excluded. Several bacteriological examinations of sputa resulted negatively. The areas of anesthesia would sometimes change slightly from one examination to another, as for instance sensation to a higher level on the arm; and toward the end of the patient's stay in bed, pin pricks over the chest would be felt, but mistaken for pressure by the pin-head.

On recommendation of Dr. Elsner, who regarded the patient as free from tuberculosis, he was permitted to return East. The dullness of the right base, which remained, was possibly due to a high position of the liver. Within the past few months Dr. J. N. Hall has called my attention to this cause for the same suspicious symptom in another case.

Of the accompanying record, for which I am indebted to the assistance of Superintendent Collins and Dr. Orth, late interne of the Jewish hospital, the first page consists of an extract from the Cincinnati hospital chart of November 9 to 26, 1902. In the light of subsequent history of the case it is probable that the slight rise of temperature, 48 hours after the *third* injection of tuberculin, together with the later records of fever which had not been preceded by such injection, were all of them of hysterical origin. The remaining pages of this chart convey a good idea of the patient's erratic temperature range while in the hospital here;  $108^{\circ}$  to  $114^{\circ}$  F. is not infrequent and once  $117^{\circ}$  F. is recorded. It will be noted that when not abnormally high the temperature was usually slightly subnormal, the lowest recorded being  $95.3-5^{\circ}$  F.

One circumstance of constant recurrence which spoke for the genuineness of the pyrexia was the stuporous mental condition and greater complaint of head-pain synchronous with each considerable rise of temperature. To develop a headache along with a record of  $117^{\circ}$  F. or thereabouts seems almost justifiable.

#### SUMMARY OF TEMPERATURE CHARTS.

The patient was in the Cincinnati (Ohio) hospital from November 9th to November 26, 1902, with hemoptysis and pain in the head and chest. The diagnosis was tuberculosis of lungs, probably of pleuritic origin. He received injections of tuberculin on the 12th, 0.005 gm.; on the 13th, 0.01 gm.; and on the 16th, 0.01 gm. There was no rise of temperature until the 18th at 6 a. m.,  $101^{\circ}$ , and 3 p. m.,  $102^{\circ}$ ; 21st, 6 p. m.,  $102^{\circ}$ ; 24th, 6 p. m.,  $103.2^{\circ}$ ; 25th, 9 p. m.,  $101.2^{\circ}$ . During the remainder of the time his temperature ranged from  $97^{\circ}$  to  $99.4^{\circ}$ .

At the National Jewish Hospital for Consumptives, in Denver, his temperature was taken (under the tongue, except

where otherwise noted) from 5 to 15 times daily, from February 12th to March 5, 1903. Mostly it ranged from  $97^{\circ}$  to  $99.4^{\circ}$ . It went below  $97^{\circ}$  as follows: February 27th, 3 p. m.,  $96.4^{\circ}$ ; 6 p. m.,  $95.6^{\circ}$ . March 2nd, 9 a. m.,  $96.4^{\circ}$ ; 6 p. m.,  $96.6^{\circ}$ . March 5th, 6 a. m.,  $96.5^{\circ}$ ; 9 p. m.,  $96.4^{\circ}$ .

The days on which the maximum temperature rose above  $100^{\circ}$  were February 12th, 9 p. m.,  $108^{\circ}$ ; the four other readings on that day having been below  $99^{\circ}$ . February 14th, 6 p. m.,  $104.4^{\circ}$ . February 16th, 9 a. m.,  $114^{\circ}$ . Four other readings on this day all below  $99^{\circ}$ . February 18th, 9 a. m.,  $106.4^{\circ}$ . February 19th, a. m.,  $109.6^{\circ}$ . Five other readings that day, the highest,  $100^{\circ}$ . February 21st, 12 m.,  $102.6^{\circ}$ ; February 22d, 4 p. m.,  $112^{\circ}$ , and the rectal temperature  $109^{\circ}$ . February 23rd, 6 p. m. and 9 p. m.,  $114^{\circ}$ . February 24th the highest recorded temperature was reached. The following is the full record for that day:

HOURL	PULSE	RESP.	TEMP.
6:00 a. m.	60	20	$97^{\circ}$
8:00 " "	60	20	$102.6$
8:30 " "	58	18	$108$
8:45 " "	58	18	$113.4$
" " "	"	"	$112$ Rectal
9:00 " "	60	20	$109$
10:00 " "	62	20	$110$
11:00 " "	58	18	$117$
12:00 m.	52	18	$114$
1:00 p. m.	60	20	$107.4$
2:00 " "	60	20	$102.6$
4:00 " "	60	18	$115$
6:00 " "	64	20	$115$
7:30 " "	60	18	$112$
9:00 " "	60	20	$100$

February 25th, 6 p. m.,  $115^{\circ}$ ; February 26th, 10 a. m.,  $114^{\circ}$ ; February 28th, 9 p. m.,  $100.4^{\circ}$ ; March 1st, 9 p. m.,  $110.6^{\circ}$ .

The suddenness of the temperature changes is well illustrated in the above table for February 24th. On February 28th there was a drop of  $8.4^{\circ}$  in 15 minutes, then a rise of  $5^{\circ}$  in the next 5 min-



utes. On February 22d a drop of  $10^{\circ}$  in one hour. On February 25th a drop of  $5.6^{\circ}$  in 30 minutes. On February 26th a drop of  $10.5^{\circ}$  in 2 hours. On March 1st a rise of  $12.6^{\circ}$  in 3 hours. The most rapid pulse, 80, was noted with temperatures of  $96.6^{\circ}$ ,  $98^{\circ}$  and  $103.6^{\circ}$ . The slowest pulse, 50, was noted with temperatures ranging from  $97.4^{\circ}$  to  $111^{\circ}$ . The respiration never fell below 18, and only once rose as high as 22 per minute.

#### Discussion.

Dr. Pershing: A year ago, in one of my papers, I reported a case of hysterical hemoptysis occurring in a Jewish patient, also a Russian about the same age as Dr. Oettinger's patient. He came from Philadelphia, however, not from Cincinnati. His name was Balter. Does that correspond with the name of your patient, doctor?

Dr. Oettinger: This man's name was Rukloff.

Dr. Pershing: This patient developed hemoptysis after falling into the water and being rescued. He was sent here from the German Hospital in Philadelphia with a great lot of creosote pills bearing the hospital mark. There was absolutely nothing the matter with his lungs. They were gone over repeatedly not only by myself, but by others. There was a bloody discoloration of the saliva. He also had hematuria. The blood in the urine was very carefully studied both chemically and microscopically. There was apparently no disease of the bladder nor urethra. This patient, after a variety of hysterical attacks, including hysterical hemiplegia, dropped out of sight.

I have never seen a case of hysterical hyperpyrexia. I have always thought that in such cases the temperature was not caused by direct suggestion, but indirectly as part of the general constitutional disturbance. I must confess that temperatures above  $113^{\circ}$  are very, very hard for me to accept as reliable observations. At  $117^{\circ}$  the patient's skin ought to be unpleasantly hot to the doctor's hand. I would like to ask Dr. Oettinger whether there was any confirmation of the thermometer by using the sense of touch upon the surface of the patient's body. The case is certainly an extremely interesting one. A good many points would suggest, at least temporarily,

something more than hysteria; but hysteria is certainly capable of doing wonderful things.

Dr. Oettinger: I would say as far as the temperature to the hand is concerned, the surface could not be said to have been markedly hot. Dr. Hopkins kindly loaned me his surface thermometer; but it was used only once, and I do not think with much skill, by the nurse of the hospital. It was broken, and it took me eight weeks to get another surface thermometer from Philadelphia. By that time the patient was out of the hospital, so I was not able to follow up that point.

#### *A CASE OF SCHOENLEIN'S DISEASE WITH SOME UNUSUAL FEATURES.*

By C. B. VAN ZANT, M. D., DENVER.

C. J., aged 24, enlisted in the United States Navy in November, 1900. He was stationed at Washington for nearly two years, having intermittent fever for two weeks while there, but being otherwise well. From September 21st to November 18, 1902, he was on shore duty on the isthmus of Panama, protecting the inter-oceanic railway during a revolution in that country. While there he was in perfect health, gaining some fifteen pounds in weight. Returning to Washington, in two months he obtained his discharge from the service and went to Cincinnati, his home, about last Christmas. While there he had severe and unaccountable headaches. On January 3rd of this year, he came to Denver, where the headache continued and was soon supplemented by severe and frequent epistaxis, swelling of the eyelids and slight rheumatic pains in various joints. These conditions persisted for nearly three months before I first saw the patient, April 9th. At this time the following conditions were noted: Lower eyelids puffed, though red; conjunctivas injected, face pale, lips anemic; a somewhat tender lump, the size of a walnut, in the left cheek, some nausea and indigestion at times, with headache, and general weakness. Urine contained a moderate



amount of albumen and some granular and hyaline casts; no sugar. Heart and lungs normal.

These conditions continued for about six weeks without material change, when more severe pains came on in the ankles, knees, shoulders and other joints; these being tender to pressure and painful on movement, but not much swollen or reddened. On May 30th there developed suddenly, that is, within a few hours, a subcutaneous nodule as large as a walnut, over the middle of the right fibula. This was slightly red, very tender, though but moderately painful, causing some stiffness of the leg. It lasted about 36 hours, gradually disappearing, and being succeeded by a similar sudden swelling over the left ulna, also painful and tender. About the time of the appearance of the first swelling in the right leg, May 30th, a few petechiae, small in size, appeared on the left leg just above the ankle, followed in a day or two by other spots on the right leg. At intervals for several weeks, these petechiae or larger hemorrhagic extravasations continued to appear on various parts of the upper and lower extremities and body. The appearance of fresh crops of the cutaneous hemorrhages was associated with or followed by severe pains and tenderness at and between the various joints of both extremities, during a period of several weeks. On June 1st the urine is recorded as containing albumen and numerous granular and hyaline casts.

June 7th, a severe tonsillitis developed in the right tonsil, with a punctate exudate, and attended with sharp fever and an ulceration on the right side of the soft palate near the uvula, of the size of a dime. This ulcer was slow in healing, requiring over two weeks.

June 11th, toward evening, an intense swelling of the lids of both eyes developed in the course of an hour, so pronounced

that the patient could not open the lids, which were as tense as in a very marked case of purulent ophthalmia. The conjunctivas were intensely injected, so that the corneas seemed to lie at the bottom of a well. The lids were red, painful and tender. In the right upper lid was a large ecchymosis. As this edema of the lids developed, all pains in the limbs suddenly ceased. The edema gradually faded out in 36 hours, and was followed by a recurrence of the rheumatic pains. At the same time there was a marked diminution of the size of the nodular swelling in the cheek, which had been present for many weeks. Epistaxis was frequent throughout the whole course of the case.

June 17th: Eyelids normal, conjunctivas much injected, pains in joints severe. Urine shows .2 per cent albumen, a very large number of red and white blood corpuscles and a few granular casts. This was the first time hematuria occurred. Throughout the whole illness the rheumatic pains have been more marked in the afternoons and evenings, as have the transient, painful edemas. The hematuria all disappeared in two days, albumen remaining on June 19th, to the amount of .33 per cent.

June 21st: Some pain in abdomen; no vomiting or diarrhoea; fresh ecchymoses over right ankle; ankles very sore in the evening; slight mitral, systolic murmur, evidently hemic, with no enlargement of the heart.

June 25th: Urine free of blood corpuscles; contains hyaline and granular casts, and .1 per cent albumen.

June 26th and 27th: Both ankles much swollen and quite painful.

July 3rd: Severe abdominal cramps and vomiting, for the first time in his illness.

July 10th: Patient was able to come to my office. Much improved, appetite good, strength returning, though there are some fresh petechiae.

On July 23, in the evening, the eye-lids again became enormously swollen in a brief time, but by morning this swelling had all disappeared. Urine contained many hyaline and granular casts, a few red and white corpuscles, and .5 per cent of albumen.

July 24th: The patient has been annoyed with insatiable thirst the last few weeks, taking about 150 ounces of water daily and passing about 140 ounces of urine daily, of a specific gravity of 1008, and containing no sugar. No fresh pains or petechiae for about a week.

August 4th: Urine acid, 1008, no sugar, albumen .1 per cent. Thirst and polyuria continue.

August 13th: Fresh crop of purpuric spots on legs.

*Conclusions:* This case presents a persistent nephritis, followed by a protracted and recurring purpura, with shifting pains in various joints and muscles, with occasional sudden oedematous swellings in the limbs and eye-lids; with tonsillitis and palatal ulceration; with epistaxis and hematuria, with occasional abdominal pain, unattended usually with vomiting or diarrhoea.

The diagnosis, in my judgment, lies between (1) chronic Bright's, with a cachectic purpura; (2) Purpura Simplex, with an angio-neurotic edema; (3) Henoch's Purpura, and (4) Schoenlein's disease.

(1) That it is not a simple chronic Bright's, with a cachectic purpura, is certain from the age of the patient; the short duration of the nephritis before the development of the purpura; from the rheumatic pains, the hematuria and epistaxis; from the diffusion of the petechiae; and, finally, from the sudden and localized oedemas.

(2) A combination of purpura simplex and angio-neurotic edema would account for many of the symptoms of the case; but against such a view are the age

of the patient, the severity of the joint symptoms, the preceding and accompanying nephritis, the lack of definite periodicity of the swellings, the lack of heredity and of severe, recurring gastro-intestinal crises.

(3) Many of the features of the case resemble those of Henoch's purpura; but the following points are opposed to this diagnosis, namely, the age of the patient, the absence of well-marked gastro-intestinal crises (including haematemesis and melena), the character of the eruption, the absence of enlargement of the spleen, the severity of the joint manifestations, the ulceration of the uvula, etc.

(4) The age (young adult life), the well marked petechiae, the hemorrhagic extravasations, the severe and recurring joint pains, the nodular oedemas of the extremities and of the eye-lids; the tonsillitis and ulceration of the uvula, the nephritis, the epistaxis and occasional hematuria, all justify the diagnosis of purpura rheumatica or Schoenlein's disease.

The case well illustrates the point insisted upon by Stephen MacKenzie in his masterly article in Allbutt's System of Medicine, namely, that the pain and general distress of this disease are always worse toward evening, tolerable comfort marking the mornings.

The edema of the eye-lids, while always present to a slight degree, was remarkable in its sudden and enormous exacerbations, always in the evenings also, and in being attended, unlike the oedema of a simple Bright's, by marked turgescence of the lids and ocular conjunctiva, all the time. The rheumatic pains and edema of the lids are notable in having preceded the purpura by several weeks.

The polyuria and great thirst, lasting now for weeks, may be simply from the nephritis; but against this are the absence of the usual cardio-vascular changes of a contracted kidney, and the constantly

large per cent of albumen present. Diabetes mellitus can be ruled out by the absence of sugar in the urine, and other features; but a possibility of diabetes insipidus as a complicating condition, remains.

As to the exact causal connection of nephritis or albuminuria with these cases of purpura rheumatica, I have never seen any adequate explanation.

[After the above article was written, the patient rapidly grew worse from nephritis; and in October died suddenly of edema of the glottis.]

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### MEDICAL EDUCATION IN COLORADO.

BY S. G. BONNEY, A. M., M. D., DENVER.

In one of the choicest essays ever contributed to medical literature, entitled "Chauvinism in Medicine," William Osler speaks of the "art of detachment as that rare and precious gift which enables one to separate himself from his environment and to take a panoramic view of the conditions under which he lives." Is it not well for the profession of Colorado, employing this art of detachment, to undertake a philosophic view of its lights and shadows, its present realities and future possibilities?

The trend of the profession is directly dependent upon medical educative thought and work. Educational influences alone mold the character, determine the proportions and direct the future of the body medical. These influences are not to be referred entirely to medical schools, but may be said to surround the practitioner to a degree throughout his active career, from close association with the state society and other medical organizations. To the medical education institutions, however, there must be accorded a predominant influence upon the real tone and vigor of the profession as well as a representation in part of its true sphere in the sociological scale. It is then to medical educa-

tion in the schools of Colorado that attention may be justly directed. Unpleasant as the task may eventuate, it is apparent that the time has come for the profession of the state to be confronted by certain essential and relevant facts and take due cognizance of their significance. In order to more clearly appreciate our relative position, it is necessary to consider at some length the general status of medical education in the United States.

The real object and scope of medical schools throughout the country is of necessity changing with the varying conditions of our national civilization. The remarkable advance in medical knowledge has demanded corresponding changes in the manner and extent of imparting instruction, as exhibited in the four years graded and systematic course of study, the increased minimum requirements for admission, the great enlargement of the curriculum by the introduction of new branches and methods of study, the increased attention to laboratory work, with opportunity afforded for the acquirement of precise scientific information capable of actual demonstration, and the amplification of the hospital and dispensary facilities, with the patient rather than the disease furnishing the text and inspiration.

Up to this point the majority of the medical schools of the United States, in so far as opportunities permitted, have endeavored with varying degrees of good faith and exactitude, to keep step with the onward march of medical education. Assuredly the two medical schools of Colorado have not been lacking in an earnest desire to remain "en rapport" with the recent advances and in the sustained effort to elevate the standard of higher medical education within the state. Speaking for the Denver and Gross College of Medicine, it is asserted that all the advanced methods of teaching medicine are observed in the course of study and that



all provisions embodied in the curriculum in conformity with the requirements of the Association of American Medical Colleges, are rigidly and conscientiously executed.

Coincident with the pedagogic advances in medicine during the past decade there have also taken place marked changes in the general sociologic and economic conditions relating to medical practice. As a result, there have been inaugurated in some of the larger institutions of medical learning, radical innovations which have not as yet been incorporated into the medical schools of Colorado, and which may be said to constitute a vital change in the policy and purposes of all institutions adopting them. While many of these changes are directly in line with the progress of modern medical thought and are indicated alike in the interests of the medical profession, the medical student and the community, they none the less aim at the very root and life of some of the smaller institutions. An explanation of the recent agitaiton is found in the supposedly unhealthful conditions of medical education due to the alleged multiplicity of medical schools resulting in a so-called oligarchy and in the apparent superfluity of medical students.

It must be admitted that during the past twenty years the number of medical schools in the United States has nearly doubled, and despite the increased standards and higher requirements the number of students during this period is increased one hundred per cent. Billings has recently pointed out that the present average is one physician to every six hundred people, and that with the natural increase of our population, together with deaths in the profession, there is reasonable opportunity based on this proportion for the accession of three thousand graduates annually. The fact exists that nearly twice this number are actually graduated, and also that

the proportion of one to six hundred is regrettably high.

Based upon such a showing it is to be expected that the popular demand should be for fewer medical schools and fewer doctors, who shall be better educated. Accordingly the dictum virtually has been promulgated on the part of some of the larger institutions that the moral right of existence be denied some of the smaller schools. In so far as this condemnation and stamp of disapproval applies to institutions existing, not because of the valid need, but flourishing as a public and professional menace, there can be no honest difference of opinion among medical educators.

With inferior teachers and entire absence of proper facilities these ventures in the past have frequently proven not unprofitable as commercial enterprises, the principle having been the maximum production at the minimum expense. Such factories have unfortunately been furnished with sufficient raw material to keep the plant in operation and foist the inferior product of their wretched machinery upon society. It is well known that the number of these bastard medical schools has already rapidly diminished. There remain, however, many comparatively small institutions of recognized merit and established reputations, with accorded honesty of purpose and highest motives, together with suitable equipment of teachers, buildings and apparatus, and with ample clinical advantages. Some of these honorable institutions have enjoyed prolonged periods of usefulness and are now striving zealously to uphold the standard of medical education.

Their distinctive sphere and high order of working ideals is beyond question. Recognized advantages do accrue from the more intimate contact of professors and students, the close relationship permitting such interchange of thought as

to more perfectly awaken incentives and inspire highest endeavor. However, it has been intimated that the life of these institutions is seriously threatened if they attempt to conform in fullest measure to the advancing standards of medical education. The reason may be ascribed to exist in the lessened revenue from tuition resulting from the diminished number of students and the greatly increased expense, both of which conditions are presupposed to obtain from the higher requirements and advancing scale of modern medical institutions. It is well to inquire more particularly into the rationale and validity of these premises.

The overcrowding of the profession incident to the multiplicity of medical schools constitutes a factor in the problem of medical education worthy of most serious thought by those who, in official positions, have to assume a portion of the responsibility in graduating classes to still further swell the ranks and increase the competition.

The responsibility of medical schools attaches (first) to the students whom they receive and graduate and to the community at whose doors the foundlings in medicine are wantonly abandoned. The student has the right to expect, after the expenditure of considerable money and years of hard and faithful preparation, a reasonable opportunity by virtue of his training and actual fitness, to provide for his family and secure ultimately a satisfactory competence. The public is entitled to belief in the thoroughness of the student's preparation, the character of his moral attainments and the high degree of his fitness to fulfill the exacting requirements and assume the responsible obligations of his profession.

It would seem to be in line with medical progress to place such rigid restrictions upon the course of study as to greatly diminish the number of graduates and in-

crease at the same time their practical proficiency. Yet despite the constantly increased requirements in many of the schools, the lengthening of the course, the added cost of securing a medical education, the appreciation of the utter impossibility of attaining proficiency in all of the branches owing to the enormous mass of medical knowledge; notwithstanding, also, the repeated warnings of the profession as to the uncertainties of success in practice, there yet appears to be an actual increase in the number of students who matriculate each year. "The large number of young men who, in the face of these discouragements, are willing and anxious to undertake the laborious task of systematic medical study, implies a certain change in the motives and aspirations of at least a portion of the more liberally educated students of to-day. Some are anxious to begin the study of the purely scientific aspects of medicine, with its opportunities for original research and investigation, while others are attracted early to the possible attainment of special knowledge and skill in certain departments in the hope of teaching as a life work, or subsequent contributions to the science of medicine rather than to the practice of the art or to the acquirement of a lucrative income.\*

This has involved the appreciation on the part of the faculty and trustees of some of our medical schools, that the true province of such institutions was not simply to graduate working doctors, but also to educate physicians of culture in its broadest sense—and this is by no means purely technical. It follows that the real mission of a modern medical school should be sufficiently comprehensive to provide for the rendering of post graduate instruction, to afford opportunity for the pursuit

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\*"Internal Medicine: To what Extent Required or Elective in the Medical Course," by the author.

of original research by certain of the faculty and by students who may elect so to do. Among the working ideals of such an institution should be the possible enlargement of the practical application of pure science, the investigation of discoveries, and the proper interpretation of new phases of medical learning.

The educative influence and the beneficence of such an institution not only upon the profession but upon the community, is entirely beyond the powers of description. If then the purposes of a modern medical school are along the lines that have been suggested supplementary to its traditional work of educating practicing physicians, it is recognized that in order to fulfill its mission there is involved the necessity of fundamental changes, though not necessarily sufficient, as claimed, to effect a complete transformation in its internal economy.

Actual statistics do not show that either the revenue from tuition or the number of students is likely to diminish on account of the increased requirements for admission. It becomes apparent that the small medical schools of high standards will suffer no material loss from this cause and that the opportunities for success in practice by virtue of a desired lessened competition are not to be thus improved. It will ever remain as in the past, a pure question among the young practitioners of the survival of the fittest. Without resorting to invidious comparisons it may be further added that the fittest do not always emerge from the largest institutions. It is asserted then that so far as relates to entrance requirements the smaller schools, without fear or prejudice to their own interests, may co-operate equally with others in an effort to raise the present standards.

If there be perfect sincerity of purpose and earnest enthusiasm for the uplifting of medical education, it is apparent that

perfunctory conformity with the requirements as laid down by the Association of American Medical Colleges is insufficient for the accomplishment of the best results. Anyone at all familiar with medical educational affairs is undoubtedly impressed by the frequent evidences of laxity and bad faith concerning entrance requirements on the part of even some of our larger and apparently prosperous institutions. It is apparent from the very nature of the conditions that they admit of such elastic application on the part of interested and partisan examiners as to virtually deprive them of much of their actual value. It is suggested that the examinations should be conducted by disinterested, unprejudiced and competent educators having no connection with the institution, and that there should be a uniformity of entrance requirements in different states, together with at least an approximate understanding as to the subsequent grading of instruction. This much to be desired advance can best be brought about by legislative enactment placing the matter of entrance examination and systematic teaching under the control of a state board of medical examiners acting under the supervision of and in conformity with a national organization. Such a course can in no wise lower the standards of reputable institutions that already are inspired to maintain a high order of entrance requirements, and it will surely dispense with the flexible and shameless morals of others. As to the second proposition, viz., the greatly increased expense incident to conducting a modern medical school, it must be admitted, as has been suggested by others, that under the new and higher regime of medical instruction the proprietary school, save under exceptional circumstances, is greatly handicapped by lack of proper facilities in its effort to keep pace with the advances instituted by the university schools.



The actual cost necessary to provide opportunity for a legitimate medical education is increasing at a most prodigious rate. In view of this it requires no prophet to show that the medical school of the future, without financial assistance and support, will be unable to exist if its ideals are high and its purposes progressive. Medical schools have long ceased to be a profitable business proposition, as any yearly surplus, if such exists, usually reverts to the school in the way of further equipment; and this in the face of the fact that the teachers devote time and energy unrestrained, without compensation. The increasing cost of maintaining reputable and honored institutions is incident to the necessity of larger buildings, with more complete laboratory equipment and apparatus. More important than this is the salary of certain of the faculty who should be compelled in progressive institutions to devote a large portion if not all of their time to the school. This, of course, refers more particularly to those teaching some of the scientific branches of the first and second year. The nature of the work demanded in the various laboratories is such as to command the undivided time of the teacher, and entitle him to a just compensation according to his ability and attainments. There can be no question that the success and usefulness of any school will depend to a large extent upon the character of the scientific work in the early part of the course, and this involves a large outlay for experienced and competent instructors, devoting their entire time to their several duties. The number of such instructors is necessarily larger than formerly in proportion to the number of students, on account of the necessity for individual or group teaching.

For the foregoing reasons it must be clear that in order to meet the demands imposed by the changed conditions of medical education, relief must be sought in

either one of two ways: First, from a close university connection; and second, if the autonomy of the medical school is to be preserved, in provision for its separate endowment. As to the matter of university affiliation, its real value to the medical school in this connection consists in the substantial aid resulting from the closeness of the relations, the control of the financial affairs, the assumption of the obligations and the guarantee of the future. Thus it is that nestling under the wing of a bona fide university offers to the medical school its protection, its most complete usefulness and its greatest permanency.

Nominal connection with a university availeth nothing, and passes for what it is really worth, a cheap subterfuge. In what way does it profit a medical school, as suggested by Dodson, to be denominated the medical department of a university embracing in its catalogue beside its department of liberal arts, one of medicine, dentistry, pharmacy, law, music, etc., the extent of which connection is summed up by its catalogue announcement to this effect and the appearance of its presiding officer once a year to confer degrees and make an address. With each department maintaining its separate board of trustees and in absolute control of its apparatus and finances it is difficult to perceive the influence for good of such an alliance. Unless the relations are more close and mutually reciprocal, with the university extending financial and moral support to the department from which it derives its largest quota of students and which furnishes the basis for its claims for prosperous usefulness, the medical school is placed in a far better position by standing substantially upon its own intrinsic merits as an institution of medical learning purely.

Another advantage resulting from an actual university connection is claimed in

the opportunity offered for the so-called telescoping of a part of the medical studies with those of the university, permitting the shortening of the time devoted to academic and medical preparation by one or two years. The manner in which it has been advocated that this be accomplished is of a somewhat variable character.

This phase of the subject of university connection is of vast importance and worthy of most thoughtful consideration even in those institutions where easily practicable.

In its fullest interpretation, viz., the conducting of the first two years of medical instruction within university walls as a part of the work for an A. B. degree, it must be recognized that it presupposes the advantages of an education purely technical to the exclusion of that broad and liberal culture derived only from college association and training.

This conception of the early invagination of the academic and medical courses is clearly in direct opposition to the spirit claimed by its adherents to the effect that two years' association with college men in a university is reflected in added culture and refinement accruing to medical students. If such is the effect of the university atmosphere and if it is admitted as necessary to raise the standards of admission, and if the two leading medical schools of the United States—Harvard and Johns Hopkins—have had the courage to demand a full A. B. degree based upon clinical and scientific requirements, wherein is the force of the argument taken by Rush that the preparatory training can be shortened by one-half and retain the broadening influences of a college course or maintain an equal standard of excellence in its requirements? If two years association with college students while engaged in scientific medical study and necessarily deprived of the most valuable

portion of a college course is good, then the entire preliminary training is surely better and productive of a higher type of education. While institutions adopting the telescoping plan are entitled to great commendation for progressive thought and action, and while their course is a distinct advance over previous requirements, the fact seems clear, nevertheless, that this position is not sustained to the effect that a part can be equal to the whole. It seems to remain a matter of reasonable doubt, however, if a shortening by one year of the time of preliminary college training might not be employed without materially detracting from the sufficient preparation of the student for medicine. This thought is emphasized by the growing tendency to specialism, rising from the popular and professional demand on account of the enormous mass of medical knowledge.

Even to these, however, it must be insisted that the chief factor in advancing the science and art of medicine has been not only the high degree of special attainment, but also the underlying basis of broad fundamental knowledge.

As to the endowment of the medical school of the future, with or without university connection, let the proposition be now advanced that greater than this exists no medical obligation upon society. Viewed either from the standpoint of true philanthropy or commercial instinct, there can be no more valid claim for financial support. In no other department of human endeavor has there taken place such astounding advances, with such unspeakably beneficent results, as exhibited even in the past fifty years of medical progress. What accomplishment in the centuries past has so resulted in the lessening of suffering as the discovery of anesthesia? What has so lengthened the span of existence as the recognition of asepsis? Can any appeal to society savor more of pure benev-

olence than that which has for its purpose the saving of life and the relief of pain? In what manner has there ever occurred such preservation of communities as has resulted from the study and investigation of yellow fever, typhoid fever, diphtheria, cholera, bubonic plague and malaria? Has anything been more intensely practical than the municipal application of the principles of modern sanitation? Is there offered to society any better return upon the investment than that from which it derives its protection and permanency?

The recent achievements in medicine, sufficient, as Osler remarks, "to make even the angels rejoice" (and it may be added all contributory to the suicide of the purely business aspects of the profession) have resulted from the labors of medical men, with the facilities and incentives afforded by medical schools. Who can state that the final achievement has already been attained in the evolution of medical progress? Who can tell what the future has still in store as a result of further stimulation to medical science and investigation? The debt of society to medicine is indeed great, and the fact that it is not more duly and fully appreciated must be construed in part to the apathy of the profession itself. Should not medical institutions justly look to the communities which are favored by their presence for an equitable measure of assistance and support?

The obligation is equally great upon the profession of any locality to extend to its reputable medical schools its legitimate aid and loyal support. It should be incumbent upon all those actively engaged in the cause of medical education to solicit the financial aid for the institutions which they represent, of the wealthy with whom sufficiently close relations may be enjoyed. There can be no difficulty about the suitable endowment of these medical

schools worthy of patronage, provided a proper enthusiasm and an earnest devotion be manifested by its faculty.

Apropos of the foregoing remarks, it may be inquired to what extent and in what manner may the medical schools of Colorado, and through them the profession of the state, profit by the thought and effort that has been exhibited by educational institutions in other states?

While the profession of Colorado may not be in a position to take the lead in matters of medical education, it can be asserted confidently that she is abundantly able to follow in the footsteps of some of the older states. It may not be out of place to assert that there has assuredly taken place already a distinct advance in medical education within the state. Two of the older medical colleges of Colorado, each of whom had previously enjoyed a successful, useful and honorable career, have recently effected a harmonious consolidation, the prime motive and inspiration of which existed in a conscientious effort to elevate the working ideals of medical education in our midst. In this the beginning of its second term one is enabled to look back upon a year of faithful endeavor, a period of unbroken harmony and perfect concord, an absolute community of interests among its faculty and an increasing influence among the profession.

What is the legitimate "*raison d'être*" of a medical school in Denver? Such an institution has an especial right to exist and a claim for support by virtue of the extent of high scientific and practical work being accomplished by its faculty, its geographical position and the actual needs of the community. Denver is rapidly becoming more and more a medical center on account of its obvious climatic advantages. There are attracted an increasing number of highly educated physicians who have previously enjoyed



special opportunities for study and research and already achieved distinction in their respective departments. There has resulted a grouping of well equipped observers, a larger corps of trained educators than can be found in any other city of this population in the United States. The character of medical educative thought and work in the city of Denver has obtained a merited national recognition. This working capital of medical culture and experience is being utilized for the benefit of young men in medicine and for society. It offers opportunity for a large number of medical students whose education has been interrupted by virtue of ill health in other schools located in relatively unfavorable climates, to complete their education in Colorado and enjoy ultimately the fruits of their previous labors.

The Denver and Gross College of Medicine, although maintained under a separate charter and distinct board of trustees, enjoys, nevertheless, a close and direct affiliation with the University of Denver, from which connection material advantages constantly accrue. In order to impose greater requirements to admission and further advance the cause of medical education in line with the progress exhibited in other schools, it will be necessary to secure, first, suitable endowment. The University of Denver, now beginning an era of prosperity, will undoubtedly respond, as opportunity presents itself to increase the usefulness of her medical department, in the way of financial assistance and in the institution of a coherent and graded course for those contemplating medicine, looking toward the shortening of the combined academic and medical course by one year and at the same time relieving the medical department of the expense of conducting its first year in medicine by well paid salaried teachers.

There exists still another medical in-

stitution within the state, sustained partly by state aid, enjoying the patronage and backing of a strong university, and possessing in this way exceptional facilities for its preparatory work of the first two years. Its greatest usefulness is largely curtailed by its mandatory location in a small community deprived to some extent of clinical advantages for junior and senior students.

There is another useful and extremely successful educative institution, but without a medical department, whose able corps of professors and laboratory facilities could easily be augmented to provide adequate instruction by paid teachers during the early portion of a medical course, but which would still be without the necessary clinical advantages which are found only in a large city like Denver.

The thought is suggested: Is it too much to hope that in the fullness of time the relations between the several institutions in Colorado could be so amicably and satisfactorily adjusted as to permit the existence of a single medical school in the state, not necessarily in direct affiliation with any university, but enjoying such close and pleasant relations with every educational institution of Colorado as to permit in co-operation with each the conducting for all students of the practical clinical work of the latter part of the medical course, in Denver, where alone proper facilities can be found? In this way alone can we hope to rise materially from our present level and place the educational status of the medical profession upon the plane where it can best and most truly represent the state. When the logic of time shall have wiped out all differences and local prejudices sufficiently to disclose clearly the wise application of one supreme allegiance, and that to the profession which we represent and whose standard we are striving to elevate, then will it be comparatively easy to secure such legis-

lative enactment as will place the control of medical educational affairs within the hands of a state board subject to the will and approval of the profession; and then will come to pass as well a state law controlling the practice of medicine. There will then result a closer bond of union between the medical schools and the various medical societies and organizations, including the many hospitals, state and municipal boards of health. Each and several being the creation and representative of the profession, a loyal devotion to its own interests would result in the appointment to all important medical offices and hospitals with reference to special fitness for administration or teaching, and not as a mark of political or other preferment.

The position of the profession in Colorado is at this time distinctly unique; but it is within its power to assert itself by strong and mutually sympathetic effort to raise the standard of medical education and set an example which many of the older states can well afford to emulate.

#### Discussion.

Dr. S. D. Van Meter: It seems almost like travesty on common sense to attempt to discuss this able paper within a period of three minutes. But as Dr. Bonney has requested me to discuss it, not from an educational point of view but from observation as medical examiner or secretary of the medical examining board, I wish simply to say that I agree most thoroughly with Dr. Bonney in his treatment of this very complex and important subject excepting in the point advocated especially by the Rush Medical College, that of shortening of the pre-medical course. Further, I wish to add that the observation of medical examining boards the country over is that while the matriculates of all the institutions are steadily improving in their pre-medical education, still it is very deplorable in many instances. Any one who thinks to the contrary will simply have his idea immediately dispelled if he will consult the files of the secretary of the license board; or the simple reading of the letters of inquiry as to the requirements to practice medicine in this state will be amply sufficient. I must say, however,

that lack of pre-medical education has steadily decreased as to the men who have graduated from 1900 up, but prior to 1900 it was deplorable. In correction of this the two points that I think Dr. Bonney covered most thoroughly and which I wish to re-emphasize are, first, the fact of independent matriculation examination. How and by what methods this will be carried on is very difficult to say. As you perhaps know, the State Board of Colorado followed in the wake of Illinois and Indiana in passing a resolution in 1902 that every institution whose diploma it would recognize must, after the graduating class of 1907, admit students only upon an A. B. degree or high school diploma, or else have a matriculation examination by some independent disinterested party. I may say, though, that this question of examination as to the premedical training should be further supported by an examination as to whether the student is likely to make a practical and successful doctor. We know the simple school education is not the essential. I think the matriculation board should certainly see to the physical and moral side of the student, or prospective student, and advise him conscientiously whether he should take up the medical course or not. I think this would turn away many students who would make a failure of the practice of medicine.

Dr. Corwin: I am much interested in this subject and I think it is one of importance to us all. I will only take a very few minutes in saying a few words. With regard to the number of doctors, I do believe that it is nonsense for us to attempt to control the number of doctors. The more the better. The poor will fall and the best will go to the top; and that is all there is to it. They will be spotted out all right. We need not trouble ourselves about that matter at all. With regard to education, the better the preparation the better it is for the student when he enters, while he is in school and after he is out of school; and that is all we can say about that. The better the education the better it is for him. I heard Dr. Sherman, last year, give an hour's talk on the subject of shortening up the literary schools. It is nonsense for us, in these days, to attempt to crowd more work into a less number of years. It takes about so long for a man to develop. His brain has not the time to expand, to receive all there is to-day (and we have more to receive than we had twenty-five years ago, infinitely more), and the idea of shortening our time by crowd-

ing more work into a less number of years is folly. Now, with regard to the education of the public. One of the essential things for us to do is to educate the public and shove the quack to the wall. The public then will see the reason of having the best doctor instead of the poorest. So let us do all we can to educate the public as well as the student.

Dr. J. W. Smith: I have no apprehension whatever in regard to the physician going back, or not keeping up with the standard of education. Medical education is on the advance and will continue to be so, corresponding to the advance of civilization in all departments. It is very true that the physicians of twenty-five years ago were not equipped in knowledge as they are to-day. That is the fact in all departments of civilization. Electricity and other things have revolutionized educational pursuits, and the physician will advance with the others. I believe that we are having a few too many physicians. It struck me rather comically that if the colleges continue to turn out the number of physicians that they are, continue the ratio of increase, there will not be enough babies born for medical graduates. However, if a young man wants to take a medical education in this country where we have such liberty in education, I believe in letting him have his medical education.

Dr. Levy: Dr. Bonney, as evidenced by his paper, has given an unusual amount of careful thought to this very complex subject; not only thought, but a great deal of study. Those of us who have followed the trend of medical education the last few years are appalled by the amount of literature that appears from time to time on the subject and by various opinions expressed by different educators all over this country. As a matter of fact it is a difficult thing for a man connected with an institution in any locality to disassociate his views on the general subject of medical education from those that pertain to the particular locality in which he is located. And when we look at the articles written by Rush men and the articles written by Johns Hopkins men we can see the personal side of the question. We can appreciate the fact that they are unduly influenced by their immediate surroundings and their immediate influences. I naturally am bound to be influenced by my surroundings in the State of Colorado. And, speaking of small schools, which we have here, one can present any number of most excellent arguments in favor of small schools; but one

in particular that I wish to call your attention to is this, notwithstanding the fact that the large schools have a great many students, their course of study is so arranged that they divide their classes into practically small schools, and they are trying in a very limited time, one year or nine months in each year, to teach a large class to the same extent that a small school teaches a limited number. The consequence is that they have many small schools in one large school attempting to cover a certain amount of ground for which they have not the time. About the only argument that we hear from medical students, when they go out to choose a medical school, in favor of a large school, is the reputation that the possession of their diploma gives them. I never saw a young man coming from a larger institution and making application for admission to the school here but who used that as the only argument in favor of the large school. I am speaking of under-graduates, not post-graduates. More than once in every term of the medical school with which I have been connected for a good many years have students come to us from large eastern schools with the statement that they are more than pleased with the change that they have made from the fact that they receive more individual attention and more thorough training. The matter of preliminary medical requirements has been touched upon. I wish to say this, that the Association of American Medical Colleges has passed the law that Dr. Van Meter has referred to, to go into effect in 1905, namely, all entrance examinations must be conducted by reputable educators who are not connected with medical schools. This is a decided advance and goes into effect in 1905. They are obliged to give additional time in order to effect any such radical ruling as that. The trend of the times is towards consolidation—consolidation of even large schools—but this applies particularly to the small schools. Colorado has two schools of excellent reputation. The two schools could very nicely conduct one school which would not be too large and at the same time would take advantage of the ability of both institutions to give a thorough medical course. I believe that it is within the bounds of possibility, or at any rate feasibility for such a condition to occur. At any rate I think it is desired on the part of the professional men of the state—men who are connected with medical schools and men who are not connected with medical schools—that



the training, whether it be in one school or another, be towards the uplifting of the profession and the upbuilding of a high standard of medical education.

Dr. Ashley: What a man does is what he believes, as a rule. I had a boy three or four years ago in the University. He said: "I want to study medicine." I said: "Young man, do you know what the requirements of Johns Hopkins are?" He said: "No." I said: "It is a bachelor's degree, a reading knowledge of German and French, a certificate of biology, chemistry and physics; now, when you reach that stage of the game you can talk about studying medicine, but don't you do it until you do." I hope within a few months more he will have reached that stage. There is where I stand on the question of medical education. I would never for a moment think of letting a boy of mine study medicine without a thorough course in some university of recognized merit; and I think the sooner we all reach that conclusion the better off will the medical profession and everybody else be.

Dr. Cooper: In behalf of the small school for medical education it has been my observation that the small school turns out practical men in the majority of instances. When we go to the large scientific institutions, Johns Hopkins, Harvard and the like, we find a great many of the men that they turn out are scientific in their tendencies, scientific to such an extent that they overlook an ordinary simple condition in looking for something unique. This is not true in the small schools. They are more eminently practical and fit a man better for the practice of medicine among the public than the large schools, which turn out men who are thoroughly familiar with bacteriology, pathology and all the list, a most up-to-date scientific knowledge. I do not mean to say that the small school does not teach bacteriology nor pathology, nor that it is not up-to-date, but they teach the student by intercourse with the professors, who are practical and who have made a practical success of medicine. I believe that that is where one of the chief advantages of the smaller school lies. By the smaller school I mean, for instance, a school like the Denver and Gross as compared with the Northwestern.

Dr. Wetherill: The real foundation upon which any educational institution stands is composed of the men who are doing the work in that particular school. It is not made up of buildings, it is not made up of the equip-

ment, it is not even made up of the endowment back of the institution. Johns Hopkins is a great school because it has great workers and great teachers in its faculty. The same may be said of the University of Pennsylvania, of Rush, of Harvard and the great New York schools, and, I maintain, the same may be said of the Denver and Gross school and of the school in connection with the University of Colorado. As has been intimated by Dr. Bonney in his paper, there is no city with which any of us are familiar where there are more capable men, more men who are able to do good work, than in the City of Denver. The peculiar situation of Denver as a health resort has made this possible. Now, sir, if we consider that the schools here are built upon the foundation of Steele, Lemen, Bancroft, Eskridge, Fisk, Stedman, Munn and Parkhill, giants in their day; if we remember that this work is being carried on to-day by Rivers, Rogers, Sewall, Bonney, Whitney, Powers, Pershing, Freeman, Levy, Hall, and other men who occupy high places in this community, in the country and throughout the world, I say, sir, we have here a foundation upon which the very best possible medical school may be maintained, and we have no apologies to make. Furthermore, I say that these schools in this state, in the City of Denver and at Boulder, are entitled to the support of every medical man in Colorado. They certainly are entitled to the support of the Colorado State Medical Society.

Dr. Ashley: Just one word of explanation. I took Johns Hopkins as a standard, but I am going to patronize Colorado schools.

Discussion closed by Dr. Bonney: I rise just now to apologize for the seeming lack of courtesy in preparing so long a paper. The nature of the subject was such that I could not seem to get it within the required time. I thank the Society for permitting me to read it, and I thank the Society for the kindly discussion.

#### COUNTY MEDICAL SOCIETIES.

The Las Animas County Medical Society held its regular meeting on the evening of April 1, at the new office of Dr. Raizon, with all of the resident members present.

A paper on "Chronic Nephritis," was read by Dr. Freudenthal, which was generally discussed.

The most important business of the evening was the election of officers for the ensuing year, which resulted as follows: President,

A. K. Carmichael; Vice President, D. G. Thompson; Secretary, James Raizon; Treasurer, D. T. Dayton.

After a lengthy discussion a committee was appointed, to report at our next regular meeting, to devise ways and means to prevent the wholesale cheating of physicians out of their fees by professional "dead beats," who make a practice of going from one doctor to another without paying their bills.

A vote of thanks was extended to Drs. Forhan, Jaffa and Thompson, the retiring officers, for the efficient service given during their term of office.

The Society met, by special invitation, at the new home and office of Dr. Raizon, which had just been completed, so that the affair was in the nature of a house warming as well as a business meeting. After the business matters were disposed of, the guests were invited into an adjoining room, where a banquet awaited them, and a royal good time was enjoyed, making it a fit closing for the most successful year in the history of the Society.

PERRY JAFFA, Secretary.

#### COMING MEETINGS.

**American Medical Association.**—The general sessions and section meetings will be held June 7 to 10, inclusive. The House of Delegates will convene at 10 a. m., Monday, June 6. The Registration Department will be open at 8 a. m., Monday. The National Auxiliary Congressional and Legislative Committee will meet on Wednesday at 2:30 p. m. A meeting to discuss subjects connected with the organization of the profession has been arranged, and the bringing together of those engaged in publishing the journals and transactions of the State Medical Societies, is proposed.

**Other Meetings at Atlantic City.**—The American Academy of Medicine will meet at Atlantic City on Saturday, June 4, and Monday, the 6th. The American Medical Editors' Association will meet on the 6th. The Association of American Medical Colleges will meet the same day, and invites visitors to its educational session. The American Proctologic Society meets on the 8th and 9th, and extends a cordial invitation to the profession at large.

**Other Events.**—The dedication of the long promised Rush Monument will occur at Washington, D. C., on Friday, June 10. The Philadelphia Schools and Hospitals have arranged a most extended series of clinics and demonstrations extending from May 30 to June 14, in-

clusive, except the days of the meetings of the American Medical Association.

**Railroad Rates.**—The railroads have granted a rate of one fare plus one dollar for the round trip in the territory of the Trunk Line Association; and the Central and Western Passenger Associations, the rate of one fare plus two dollars for the round trip. Tickets will be sold June 1st to 4th, good returning until June 13; with privilege of extension under certain conditions, and stop-overs at Philadelphia, Baltimore and Washington. The Association special train will leave Chicago over the Pennsylvania line, Sunday, June 5, at 2 p. m.

**Canadian Medical Association.**—The meeting of this Association will be held at Vancouver, B. C., August 23-26, inclusive. Members of the Colorado State Medical Society are invited to attend its meetings.

**The Colorado State Medical Society** will meet in Denver, October 4-6. To arrange for the meeting, the Denver County Medical Society has appointed the following committee: Melville Black, Chairman; C. P. Conroy, S. G. Bonney, G. B. Packard and E. W. Stevens.

**The American Medico-Psychological Association** meets at St. Louis May 30 to June 3.

#### DEATHS.

**Dr. Michael Enright**, a graduate of Rush Medical College of the class of 1881, died suddenly of heart disease, April 8, at Akron, Colo.; where he had been engaged in practice for 18 years.

#### NEWS ITEMS.

**The Golden Belt Medical Society** celebrated its Fifteenth Anniversary with a meeting at Abilene, Kan., April 7, 1904. Two scientific sessions and a dinner filled up the program. An address upon "Altitude Treatment of Pulmonary Diseases" was given by Dr. J. N. Hall, of Denver, Colo.

**Dr. P. V. Carlin** was one of the successful candidates at the election for school directors held in Denver, May 2.

**Dr. Al. L. Timmerman**, of La Junta, has accepted a position with one of the packing houses of St. Joseph, Mo., as company surgeon, and will leave for that point on April 20.

**Dr. H. S. Hall**, of Missouri, has located in La Junta. He is a graduate of Rush, Class '90.

**Dr. A. L. Stubbs**, La Junta, has resigned as health officer of Otero county, and Dr. Wm. Donlon, La Junta, has been appointed to the position.

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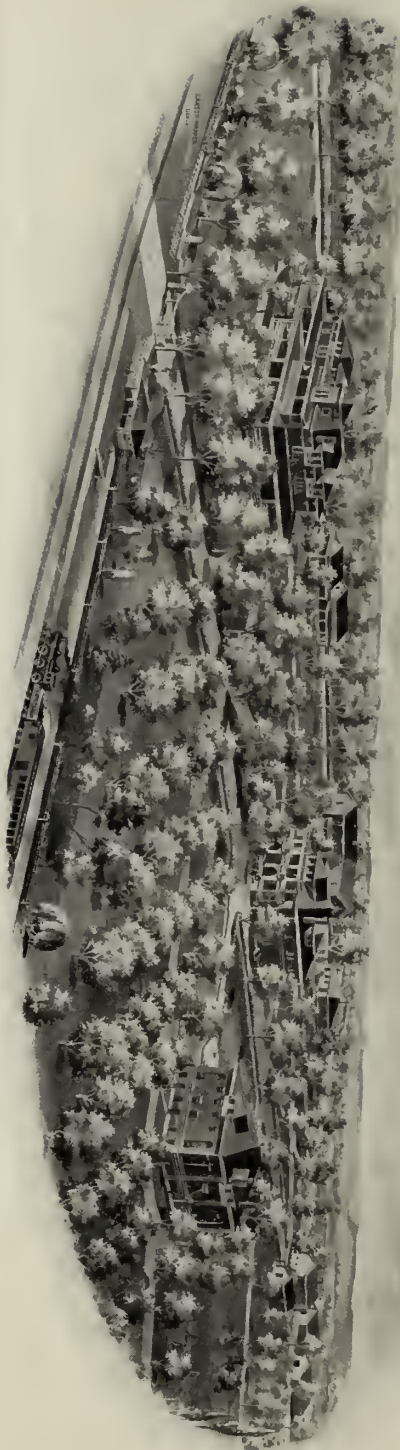
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### MEDICAL MEETINGS FOR 1904.

SOCIETY.	PLACE.	TIME.
American Medical Association.....	Atlantic City .....	June 7-10, 1904.
Secretary, Geo. H. Simmons, 103 Dearborn Ave., Chicago.		
Colorado State Medical Society.....	Denver .....	October 4-6, 1904.
Secretary, J. M. Blaine, Steele Block, Denver.		
Idaho State Medical Society.....	Lewiston .....	October 6-7, 1904.
Secretary, Ed. E. Maxey, Boise, Idaho.		
Wyoming State Medical Society.....	Rawlins .....	September 13, 1904.
Secretary, H. S. Finney, Rawlins.		
American Academy of Ophthalmology and Oto-Laryngology.....	Denver .....	August 24-26, 1904.
Secretary, D. T. Vail, 4 W. Seventh St., Cincinnati, Ohio.		
Rocky Mountain Interstate Medical Society.....	Denver .....	September 6-7, 1904.
Secretary, Geo. A. Moleen, 316 Mack Block, Denver.		





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